

REMARKS/ARGUMENTS

Claims 1-47 were pending of which Claims 1-6, 15, 20-24, 28-33, and 39-44 were rejected and Claims 7-14, 16-19, 25-27, 34-38, 40-43, and 45-47 were objected to. No amendments are presented in this response, thus Claims 1-47 remain pending.

No new matter has been added in the claims.

Claim Rejections - 35 U.S.C. §102

Claims 1-6, 15, 20-24, 28-33, and 39-44 were rejected under 35 U.S.C. §102(b) as being anticipated by Ward et al. (US Patent no. 6,061,100).

Claim 1 and 32

Specifically with regards to Claim 1 and 32 the Examiner stated that:

Ward discloses the same system and method of detecting still pixels in a video stream having a plurality of fields including an early field having an early current pixel and a late field having a late current pixel (See Ward Abstract), the method comprising defining a first window of pixels of the late field, wherein the first window includes the late current pixel (See col. Lines 58-66, col. 5, lines 63-65) performing a first window still pixel test using the pixels of the first window (See Ward fig. 7, col. 7, lines 8-27), defining a second window of pixels of the late field, wherein the second window includes the late current pixel (See fig. 3, and col. 7, lines 11-30), and performing a second window still pixel test using the pixels of the second window (See col.

7, lines 28-45). The applicant should note that the matrices shown in fig. 3 define the first and second windows. In addition, the frame is divided into two fields wherein the delayed field is the late field, and the current field is the early field as seen in col. 5, lines 60-67. (Emphasis added)

Applicants respectfully submit that the Examiner has misinterpreted the teachings of Ward et al. Specifically, the Examiner stated that "the matrices shown in fig. 3 define the first and second windows." Applicants are not certain whether the Examiner used "the matrices" to refer to the matrices of squares labeled 300-314, 315-329, and 330-344 or to the matrices of circles in the boxed portion of Fig. 3. However, Applicants respectfully submit that neither the matrices of squares or the matrices of circles teach or suggest "a first window of pixels of the late field, wherein the first window includes the late current pixel" and "a second window of pixels of the late field, wherein the second window includes the late current pixel" as recited in Claim 1.

With regards to the matrices of squares, Applicants respectfully submit that each of the matrices is used for a different frame and thus do not define "a first window of pixels of the late field" and "a second window of pixels of the late field" as recited in Claim 1 (emphasis added). Specifically, as shown in Fig. 3, each of the matrices of squares receives a different input signal and generates a different output signal. Specifically, the matrix of squares labeled 300-314 receives signal 211 and is used to generate signal 371, the matrix of squares labeled 314-329 receives signal 212 and is used to generate signal 372, and the matrix of squares labeled 330-344 receives signal 213 and is used to generate signal 373. However,

"Signals 211, 212, and 213 indicate the motion mode of the target pixel with respect to frame1, frame2 and frame3, respectively" (Ward, Col. 6, lines 34-36). Furthermore "the 1-bit output signal 371 indicates the decision on the motion status of the target pixel: either still status or a motion status" (Ward, et al. Col. 7, lines 16-19). "Similarly, the output signals 372 and 373 indicating motion status of the target pixel with respect to frame 2 and frame 3 respectively are obtained." (Ward, et al. Col. 7, lines 28-30). Therefore, Applicants respectfully submit that "the matrices of fig. 3" are used for different frames rather than different windows. Accordingly, Applicants respectfully submit that the matrices do not teach or suggest "a first window of pixels of the late field" and "a second window of pixels of the late field" as recited in Claim 1.

With respect to the matrices of circles, Applicants respectfully submit that the matrices of circles are used to represent patterns of data rather than actual "windows of pixels". Specifically, Ward et al. teaches that "The pattern recognition circuit analyzes the neighboring area of the target pixel e.g. a 5x3 window, forms a 5x3 matrix of the motion modes of each pixel and detects if the matrix fits one of the six patterns shown in Fig. 3." Thus, Applicants respectfully submit that Claim 1 is patentable over Ward, et al. Reconsideration and withdrawal of this rejection is respectfully requested. Claims 2-14 depend from Claim 1 and are, therefore, likewise patentable.

Claim 32 is the means plus function equivalent of Claim 1. Therefore, Applicants respectfully submit that the arguments presented above are also applicable to Claim 32. Accordingly, Applicant respectfully request reconsideration and withdrawal of the rejection of Claim 32. Claims 33-38 depend from Claim 32 and are therefore likewise patentable.

Claims 15, 24, 39, and 44

As per claims 15, 24, 39, and 44 The examiner stated that:

Ward discloses the same system and method of detecting still pixels in a video stream having a plurality of fields including an early field having an early current pixel and a late field having a late current pixel (See Ward Abstract, col. 5, lines 63-65), the method comprising defining a first window containing a first plurality of pixels, wherein the first plurality of pixels includes the late current pixel (See col. 6, lines 58-66), calculating a pixel pair difference for each pixel in the first window to generate a plurality of pixel pair differences (See col. 8, lines 50-56 and col. 9, lines 41-47), summing the absolute values of each pixel pair difference that is greater than a summation threshold to create a correlation sum of the first window (See col. 6, lines 12-42), comparing the correlation sum of the first window with a correlation threshold, wherein the late current pixel is classified as a still pixel when the correlation sum divided by a size of the first window is less than or equal a correlation threshold (See col. 6, lines 44-67 and col. 7, lines 1-7). The applicant should note that the step of comparing the correlation of the target pixel with its surrounding must inherently be compared to a correlation threshold. In addition, the number of pixels making up the matrix will determine the window size. (emphasis added)

Applicants respectfully submits that Ward et al. does not teach or suggest "summing the absolute value of each pixel pair difference that is greater than a summation threshold to create a

correlation sum of the first window;" as recited in Claims 15 and 39 or "summing the absolute value of each pixel pair difference to create a correlation sum of the first window;" as recited in Claims 24 and 44. The Examiner cited Ward, et al. col. 6 lines 12-42 with respect to "summing the absolute value of each pixel pair difference ... to create a correlation sum". However, Applicant has found no indication that any summation occurs in the cited sections of Ward. Specifically, Ward teaches that "Temporal motion detect circuit detects motion by comparing the differences between the target pixel and its corresponding pixel in each of the past three frames with a threshold." (Ward, et al. Col. 6, lines 12-14) Furthermore Ward teaches that "if $|\Delta|$ the absolute difference between the target pixel and its corresponding pixel in a past frame is greater than the threshold, the target pixel is considered as in motion with respect to this past frame. Signals 211, 212 or 213 indicate the motion mode of the target pixel with respect to frame 1, frame2 and frame3, respectively." (Ward, et al. Col. 6, lines 31-36) Thus, Applicant respectfully submits that Ward et al. determines whether the pixel is still without "summing the absolute value of each pixel pair difference that is greater than a summation threshold to create a correlation sum of the first window;" as recited in Claims 15 and 39 or "summing the absolute value of each pixel pair difference to create a correlation sum of the first window;" as recited in Claims 24 and 44.

Ward however does use summation in Fig. 4 (see 480). However, as explained by Ward et al. "the spatial motion detection circuit calculates a motion index value on an $m \times n$ matrix whose elements are equal to the values 0 or 1 and represent the motion status of the pixels." (Ward et al. Col. 7, lines 36-39). Thus this summation process does not teach or suggest "summing the

absolute value of each pixel pair difference that is greater than a summation threshold to create a correlation sum of the first window;" as recited in Claims 15 and 39 or "summing the absolute value of each pixel pair difference to create a correlation sum of the first window;" as recited in Claims 24 and 44. Accordingly, Applicant respectfully request reconsideration and withdrawal of the rejection of Claims 15, 24, 39 and 44. Furthermore, Applicants respectfully submit that Claims 16-23, which depend from Claim 15, Claims 25-38, which depend from Claim 24, Claims 40-43, which depend from Claim 39, and Claims 45-47, which depend from Claim 44, are likewise patentable. Therefore, Applicants respectfully request allowance of Claims 15-47.

Allowable Subject Matter

The Examiner stated that Claims 7-15, 16-19, 25-27, 34-38, 40-43, and 45-47 are objected to as being dependent upon a rejected base claim but be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim." Applicants gratefully acknowledge the Examiner's finding of allowable subject matter. However, for the reasons given above, Applicants respectfully submit that the base claims are also allowable.

Conclusion

For the above reasons, Applicants respectfully request allowance of Claims 1-47. Should the Examiner have any questions concerning this response, the Examiner is invited to call the undersigned at (408) 857-0559.

Respectfully submitted,

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April 30, 2007

Date